a semiconductor chip disposed over another surface of the substrate and including a plurality of electrodes to be positioned over the holes; and

conductive posts provided contiguously on the electrodes and within the holes to be electrically connected to the interconnecting pattern.

REMARKS

Claims 1-19 and 33 are pending. By this Amendment, claim 1 is amended and claims 20-32 are canceled. No new matter has been added. Reconsideration in view of the above amendments and following remarks is respectfully requested. The attached Appendix includes a marked-up copy of rewritten claim 1 (37 C.F.R. §1.121(c)(1)(ii)).

Applicant gratefully acknowledges that claims 7-9 and 13-15 contain allowable subject matter.

Entry of this Amendment is proper under 37 C.F.R. §1.116 since the Amendment: (a) places the Application in condition for allowance (for the reasons discussed herein); (b) does not raise any new issue requiring further search and/or consideration (since the amendments amplify issues previously discussed throughout the prosecution); (c) satisfies a requirement of form asserted in the previous Office Action; and (d) places the Application in better form for appeal, should an appeal be necessary. Entry of this Amendment is thus respectfully requested.

The Office Action rejects claims 1-5, 10-11 and 17 under 35 U.S.C. §102(b) over U.S. Patent 5,949,142 to Otsuka. Claims 6, 12, 16 and 18-19 under 35 U.S.C. §103(a) over Otsuka; and claim 33 under 35 U.S.C. §103(a) over Otsuka in view of U.S. Publication 2002/0003308 A1 to Kim et al. These rejections are respectfully traversed.

Otsuka fails to teach or suggest all the features recited in independent claim 1. In particular, Otsuka fails to teach or suggest a semiconductor device including "conductive

posts provided contiguously on the electrode and within the holes to be electrically connected to the interconnecting pattern" (emphasis added), as recited in independent claim 1.

The Office Action asserts that Otsuka discloses "conductive posts (4a, 4c)... on the electrode 2a." See the Office Action, e.g., page 4, lines 4-7, and page 7, section 5, lines 5-8. However, Otsuka instead discloses that the metal platform 4a and interlevel conductive bump 4c are not provided contiguously on the electrode 2a. In stark contrast to claim 1, the metal pattern 4a and interlevel conductive bump 4c in Otsuka are provided between the interlevel conductive bump 4c and electrode 2a. See, e.g., Figs. 1-3. Specifically, the metal pattern 4a is laid over the interlevel conductive bump 4c and an anisotropic conductive film 6 having small conductive particle 6a is laid over the metal pattern 4a. That is, the anisotropic conductive film 6 having small conductive particle 6a, is disposed between the metal pattern 4a and conductive bump 2a. See, e.g., col. 4, lines 13-30, and col. 4, line 65 to col. 5, line 5. Thus, Otsuka fails to teach or suggest that the conductive posts (4a, 4c) are provided contiguously on, or touching, the electrode 2a and within the holes to be electrically connected to an interconnecting pattern.

Further, Kim fails to cure the deficiencies of Otsuka discussed above with respect to independent claim 1. See, e.g., Figs. 3-4.

Accordingly, the Office Action has not established a prima facie case of obviousness, as the applied references fail, alone or in combination, to teach, suggest or render obvious all of the subject matter of independent claim 1. The applied references also fail to anticipate the subject matter of claims 2-19 and 33, which depend from independent claim 1. Withdrawal of the rejections under 35 U.S.C. §102(b) and §103(a) is therefore respectfully solicited.

In view of the foregoing, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,

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JAO:RZE/dmw

Date: February 6, 2003

Attachment:
Appendix

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

DEPOSIT ACCOUNT USE AUTHORIZATION
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Charge any fee due to our Deposit Account No. 15-0461

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APPENDIX

Changes to Claims:

The following are marked-up versions of the amended claims:

1. (Twice Amended) A semiconductor device comprising:

a substrate including a plurality of holes and a surface over which an interconnecting pattern is formed, part of the interconnecting pattern being superposed over the holes;

a semiconductor chip disposed over another surface of the substrate and including a plurality of electrodes to be positioned over the holes; and

conductive posts provided contiguously on the electrodes and within the holes to be electrically connected to the interconnecting pattern.